AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Cancelled)

2. (Previously Presented) The method of claim 10, further comprising selecting a weight-based or a priority-based scheduling discipline based on the subgroup whereto the packet in question belongs or on how inbound packets of the same class of service received at the scheduler input port preceding or following the packet in question are distributed between the subgroups.

3. (Previously Presented) The method of claim 10, said weight-based scheduling discipline comprising a SFQ (Start-time Fair Queuing) discipline.

4. (Previously Presented) The method of claim 10, said weight-based scheduling discipline comprising a WFQ (Weighted Fair Queuing) discipline.

5. (Cancelled)

6. (Previously Presented) The apparatus of claim 12, further comprising a device for choosing either a weight-based or a priority-based scheduling discipline based on the subgroup whereto the packet in question belongs or on how inbound packets of the same class of service received at the scheduler input port preceding or following the packet in question are distributed between the subgroups.

7. (Previously Presented) The apparatus of claim 12, further comprising a device for carrying out a weight-based scheduling discipline using a SFQ (Start-time Fair Queuing) discipline.

8. (Previously Presented) The apparatus of claim 12, further comprising a device for carrying out a weight-based scheduling discipline using a WFQ (Weighted Fair Queuing) discipline.

9. (Currently Amended) A method for scheduling link bandwidth between different packet-switched data flows comprising:

classifying digital data packets of fixed or variable length into one of at least two classes of service wherein said classes of service represent a range of service levels between "real-time" and "best-effort" and each class of service is represented by at least one parallel FIFO (first-in-first-out) queue;

further classifying packets from at least one class of service into one of at least two internal subgroups within the at least one class of service; and

scheduling available bandwidth of transmission links between class-of-service specific FIFO queues using a bandwidth scheduling discipline that ensures instantaneous availability of unutilized portions of bandwidth from all service classes to all effort-based service classes in a specific, consistent, configurable, ratio by assigning a priority value to a packet based on a combination of the packet's class of service and the subgroup information ~~(such as drop precedence)~~ of the packet or at least one packet immediately preceding or following said packet.

10. (Previously Presented) The method of claim 9, said bandwidth scheduling discipline comprising at least one of a weight-based scheduling discipline, a priority-based scheduling discipline, or a combination of weight and priority-based scheduling disciplines.

11. (Currently Amended) An apparatus for scheduling link bandwidth between different packet-switched data flows comprising:

a device for classifying digital data packets of fixed or variable length into one of at least two classes of service wherein said classes of service represent a range of service levels between "real-time" and "best-effort" and each class of service is represented by at least one parallel FIFO (first-in-first-out) queue;

a device for further classifying packets from at least one class of service into one of at least two internal subgroups within the at least one class of service; and

a device for scheduling available bandwidth of transmission links between class-of-service specific FIFO queues using a bandwidth scheduling discipline that ensures instantaneous availability of unutilized portions of bandwidth from all service classes to all effort-based service classes in a specific, consistent, configurable, ratio by assigning a priority value to a packet based on a combination of the packet's class of service and the subgroup information ~~(such as drop precedence)~~ of the packet and at least one packet immediately preceding or following said packet.

12. (Previously Presented) The apparatus of claim 11, said bandwidth scheduling discipline comprising at least one of a weight-based scheduling discipline, a priority-based scheduling discipline, or a combination of weight and priority-based scheduling disciplines.

13. (Currently Amended) A computer readable medium having embodied thereon a program for scheduling link bandwidth between different packet-switched data flows which, when executed by a computer, performs the steps of:

classifying digital data packets of fixed or variable length into one of at least two classes of service wherein said classes of service represent a range of service levels between "real-time" and "best-effort" and each class of service is represented by at least one parallel FIFO (first-in-first-out) queue;

further classifying packets from at least one class of service into one of at least two internal subgroups within the at least one class of service; and

scheduling available bandwidth of transmission links between class-of-service specific FIFO queues using a bandwidth schedule method that ensures instantaneous availability of unutilized portions of bandwidth from all service classes to all effort-based service classes in a specific, consistent, configurable, ratio by assigning a priority value to a packet based on a combination of the packet's class of service and the subgroup information ~~(such as drop~~

~~precedence~~) of the packet and at least one packet immediately preceding or following said packet.

14. (Previously Presented) The program of claim 13, said bandwidth scheduling discipline comprising at least one of a weight-based scheduling discipline, a priority-based scheduling discipline, or a combination of weight and priority-based scheduling disciplines.

15. (Previously Presented) The program of claim 14, further comprising selecting a weight-based or a priority-based scheduling discipline based on the subgroup whereto the packet in question belongs or on how inbound packets of the same class of service received at the scheduler input port preceding or following the packet in question are distributed between the subgroups.

16. (Previously Presented) The program of claim 14, said weight-based scheduling discipline comprising a SFQ (Start-time Fair Queuing) discipline.

17. (Previously Presented) The program of claim 14, said weight-based scheduling discipline comprising a WFQ (Weighted Fair Queuing) discipline.

18. (New) The apparatus of claim 9, said subgroup information comprising drop precedence.

19. (New) The method of claim 11, said subgroup information comprising drop precedence.

20. (New) The computer readable medium of claim 13, said subgroup information comprising drop precedence.